555,341

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 11 November 2004 (11.11.2004)

PCT

(10) International Publication Number $WO\ 2004/097477\ A2$

- (51) International Patent Classification7: G02B 6/32, 6/42
- (21) International Application Number:

PCT/GB2004/001802

- (22) International Filing Date: 23 April 2004 (23.04.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

- (30) Priority Data:
 - 0309908.2 0323707.0

30 April 2003 (30.04.2003) GB 10 October 2003 (10.10.2003) GB

- (71) Applicant (for all designated States except MG, US): TYCO ELECTRONICS RAYCHEM NV [BE/BE]; Diestsesteenweg 692, B-3010 Kessel-Lo (BE).
- (71) Applicant (for MG only): TYCO ELECTRONICS UK LTD [GB/GB]; Faraday Road, Dorcan, Swindon wiltshire SN3 5HH (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): WATTE, Jan [BE/BE]; Molenstraat 168, B-1851 Grimbergen (BE). DAEMS, Daniel [BE/BE]; De Dreef Van Zonnebos 10, B-2970 s'-Gravenwezel (BE). VOLCKAERTS, Bart [BE/BE]; De Costerstraat 6, B-2140 Borgerhout (BE). OTTEVAERE, Heidi [BE/BE]; P.P. Rubenslaan 5, B-1500 Halle (BE). THIENPONT, Hugo [BE/BE]; J. Debusscherstraat 42, B-1500 Halle (BE).

- (74) Agent: JAY, Anthony, William; Tyco Electronics UK Ltd, European Patent Department, Faraday Road, Dorcan, Swindon Wiltshire SN3 5HH (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

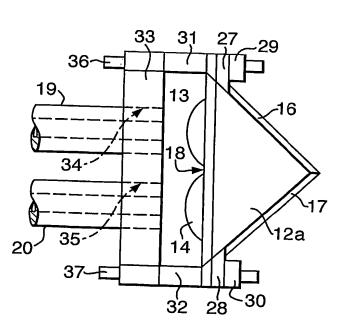
of inventorship (Rule 4.17(iv)) for US only

Published:

 without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: A CONNECTOR DEVICE FOR COUPLING OPTICAL FIBRES, AND METHOD OF PRODUCTION THEREOF



(57) Abstract: A connector device for coupling non-aligned optical fibres (19, 20), in which light is directed from one fibre to another by a reflector (12) and lenses (13, 14) and the positional relationship between the ends of the optical fibres and the reflector is determined by means (31, 32, 33) for locating the end of each optical fibre to be coupled in a predetermined position both parallel to and transverse the length of the fibre. Also covers a connector device for optically coupling an optical fibre (101, Fig.14) to deliver light to or receive light from another optical component (102) by way of a lens (110), in which the positional relationship between the end of the optical fibre and the said other optical component is determined by means (106) for locating the end of the said optical fibre in a predetermined position both parallel to and transverse the length of the fibre with respect to the said optical component.

WO 2004/097477 A2

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.